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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,456	02/12/2004	James M. Cullen	82126	2299

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EXAMINER

LIEU, JULIE BICHNGOC

ART UNIT	PAPER NUMBER
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2612

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/777,456

Applicant(s)

CULLEN ET AL.

Examiner

Julie Lieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34-43 and 49-54 is/are allowed.
- 6) ☒ Claim(s) 1-25, 27-33 and 44-48 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/23/04 and 10/26/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8, 10-12, 15, 29, 30, 32, 33, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Grabau et al. (US Patent No. 6,451,154).

Claim 1:

Grabau et al. (Grabau) discloses a tag comprising:

- a. an inlay 15, the inlay comprising:
 - i. an antenna 15B, and
 - ii. a wireless communication device 15A coupled to the antenna; and
- b. a plastic 48 the plastic extrudate encapsulating the antenna 15B and the wireless communication device 15A.

see front-page figure.

Claim 2:

Wireless communication device 15A is a radio frequency (RF) communication device.

Claim 3:

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Inlay 15 further comprises a carrier sheet 12 on which the antenna is disposed.

Claim 4:

Antenna 15B is printed onto the carrier sheet 12.

Claim 8:

The wireless communication device 15B is in the form of an integrated circuit (IC) chip which is conductively bonded to the antenna.

Claim 10:

The plastic extrudate 48 in Grabau's device is a unitary member.

Claim 11:

plastic extrudate 48 comprises a top member and a bottom member, the top member and the bottom member cooperatively encapsulating the antenna and the wireless communication device. See front-page figure.

Claim 12:

Grabau disclose an apparatus, thus, also a method of continuously manufacturing a plurality of tags, each tag comprising a plastic extrudate and an inlay surrounded by the plastic extrudate, the method comprising the steps of:

- a. providing a continuous supply of inlays 15, the continuous supply of inlays comprising a continuous carrier web 44, a plurality of antennae 15A positioned on the continuous carrier web at spaced intervals and a wireless communication device coupled to each of the antennae,

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- b. feeding the continuous supply of inlays 15 into a cross-head extruder so as to yield a continuous block which includes the continuous supply of inlays surrounded by a plastic extrudate 48, and
- c. cutting said continuous block between successive antennae so as to yield individual tags.

See front-page figure and figs. 7-10.

Claim 15:

Grabau discloses mounting an adhesive to the underside of the continuous block.

Claim 29:

Grabau discloses a continuous supply of inlays comprising:

- a. a continuous web 44,
- b. a plurality of antennae 15B disposed on the top surface of the continuous web at spaced intervals, and
- c. a plurality of wireless communication devices 15A, each wireless communication device being coupled to a corresponding antenna.

See front-page figure.

Claim 30:

Each of the plurality of wireless communication devices is a radio frequency (RF) communication device.

Claim 32:

The plurality of antennae is printed onto the top surface of the continuous web.

Claim 33:

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Each wireless communication device 15A is conductively coupled to a corresponding antenna.

Claim 44

Grabau discloses a method of continuously manufacturing a plurality of tags, the method comprising the steps of:

- a. providing a single continuous strip 61 having a plurality longitudinal cavities 66 at spaced intervals
- b. depositing a an inlay 15 within each cavity, the inlay comprising a carrier web 12, an antenna disposed on the carrier web 12, and a wireless communication device coupled to the antennae 15B,
- c. applying a single continuous web to enclose each inlay, and
- c. cutting the continuous supply of inlays and the single continuous strip between successive antennae to yield individual tags.

See fig. 5, 6, and 11.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 5-7, 9, 13, 14, 16-25, 27, 28, 31, and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Grabau et al. (US Patent No. 6,451,154).

Claims 5-7:

Grabau fails to disclose a metallic reflector coupled to the plastic extrudate. However, the use of a metallic backing antennas is old and well known in the art. Therefore, one skilled in the art would have readily recognized the use of a reflector in the device disclosed in Grabau because it would enhance the operating range of the transponder. It would also been obvious to one skilled in the art to laminate the metallic reflector, by using an adhesive, onto the exterior surface of the plastic extrudate because it is at the closest location of the antenna and adhesive is the best way of attaching it to the surface of the plastic extrudate.

Claim 9:

Antenna 15A in Grabau is a dipole antenna. It is not clearly stated in the reference that the antenna is bilaterally symmetrical. Nevertheless, it would have been obvious to one skilled

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in the art to use a bilaterally symmetrical dipole antenna in Grabau's device because it is old and conventional in the art.

Claim 13:

The rejection of claim 13 recites the rejection of claim 5.

Claim 14:

Though not discussed in Grabau, it would have been obvious to one of ordinary skill in the art to cool the continuous block before cutting the web because it is desirable for the device to be rigidly formed.

Claim 16:

Grabau discloses a tag comprising

- a. a plastic casing 48 comprising
 - (i) a bottom member shaped to define a space functionally equivalent as a longitudinal cavity, and
 - (ii) a top member applied to said bottom member to at least partially enclose the longitudinal space, and
- b. an inlay 15 disposed within the longitudinal cavity, the inlay comprising
 - 1) a carrier sheet 12,
 - 2) an antenna 15B disposed on said carrier sheet, and
 - 3) a wireless communication device 15A coupled to the antenna.

See front-page figure.

Claim 17:

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The wireless communication device 15A is a radio frequency (RF) communication device.

Claim 18:

Antenna 15B is printed onto the carrier sheet.

Claim 19:

The rejection of claim 19 recites the rejection of claim 5.

Claim 20:

The device in Grabau further comprises a mounting adhesive 49 coupled to said plastic casing 48.

Claim 21:

Wireless communication device 15A is in the form of an integrated circuit (IC) chip which is conductively bonded to antenna 15B.

Claim 22:

The rejection of claim 23 recites the rejection of claim 9.

Claim 23, 24, and 28:

Lacking of criticality as to why the longitudinal cavity must be formed of such length or shape as claimed and why the top member must be a plug molded to the bottom member, it appears that the space of wherein the inlay resides in the Grabau device would be functionally equivalent as that claimed.

Claim 25:

The top member is a flat sheet affixed to the bottom member as shown in front page figure.

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Claim 27:

The length of the section where the inlay lies is only a portion of the length of the bottom member.

Claim 31:

Grabau fails to disclose that the continuous web is constructed of a polymeric film selected from the group consisting of a polyester film, a polyethylene terephthalate film and a polyimide film. However, it would have been obvious to one skilled in the art that this type of material is convention and could be used as a backing web material for attaching RFID tags during manufacturing process.

Claim 45:

Grabau fails to disclose step of crimping. However, it would have been obvious to one skilled in the art to crimp the device before cutting because it is desired to secure the device to the web and the top cover or laminating layer.

Claim 46:

The rejection of claim 46 recites the rejection of claim 5, except it is a method claim.

Claim 47:

Grabau further discloses the step of coupling a mounting adhesive to the underside of the single continuous strip. See figure 12.

Claim 48:

It appears that the continuous strip in Grabau is formed by extrusion and cavities in the continuous strip are formed by thermoforming wherein the continuous web is formed by extrusion molding.

Allowable Subject Matter

6. Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 34-43 and 49-54 are allowed.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Green et al., US 2006/0213609.

Nowaczyk, US Patent No. 6,371,187.

Norwaczyk, US Patent No. 6,096,153.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on MaxiFlex.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Julie Lieu', with a long horizontal flourish extending to the right.

Julie Lieu
Primary Examiner
Art Unit 2612

Jan 06, 07